

# [3D DITHER ALGORITHM]

## Abstract

A four-time resolution refinement of 3D-dither algorithm is provided in this present invention. A 4x2 pixel-block is treated as an observed unit in this present invention, which includes two 2x2 pixel-blocks. In order to eliminate moving lines and dithered edges, the two least significant bits (LSBs) of the pixels are treated depending on cases. For the first 2x2 pixel-block, when 2-bit LSBs being 01 and 11, the pixel being assigned a carry is an upper-left, lower-right, lower-left, and upper-right sequence in a 2x2 pixel-block for four sequential frames. For the second 2x2 pixel-block, when 2-bit LSBs being 01 and 11, the pixel being assigned a carry is a lower-left, upper-right, upper-left, and lower-right sequence in a 2x2 pixel-block for four sequential frames. For both 2x2 pixel blocks, no pixel is treated for 2-bit LSBs being 00. For 2-bit LSBs being 10, the pixel row of the 4x2 block switches between the upper and the lower row for every frame. Another embodiment similar to the above first embodiment is also provided in the present invention.